EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2023 MALAWI SCHOOL CERTIFICATE OF EDUCATION EXAMINATION

GEOGRAPHY

Subject Number: M073/I

Tuesday, 11 July

Time Allowed: 2 h 30 min
8:00 – 10:30 am

PAPER I

(100 marks)

MAP READING AND PHYSICAL GEOGRAPHY

Instructions

1. **This paper contains 13 printed pages. Please check.**
2. The paper has **five** questions.
3. There are **two** sections, **A** and **B.** Follow the instructions for each section carefully.
4. Write your **Examination Number** on top of each page of the question paper.
5. In the table provided on this page, **tick against** the number of the question you have answered.
6. Hand in the **question paper** to the invigilator when time is called to stop writing.

Question Number	Tick if answered	Do not write in these columns	
1			
2			
3			
4			
5			

Section A (75 marks)

Answer **all** the questions in this section in the spaces provided.

1. Study the **1:50,000** map extract for Zomba sheet **1533 B3** and use it to answer questions that follow.

a. (i) Identify the human made feature located on **six-figure** grid reference **777985**.

_____

(1 mark)

(ii) Find the six-figure grid reference for the trigonometric point **Chilwa 1060**.

_____

(2 marks)

b. Calculate the bearing of trigonometric station **1060** from trigonometric station **629.**

_____

_____

(3 marks)

c. Account for the distribution of settlements in the region captured on the map. Give any **one** point.

_____

_____

_____

(3 marks)

d. Explain any **one** environmental challenge which is experienced by residents in the area shown on the map.

_____

_____

1. (Continued)

e. Find the area of Lake Chilwa captured on the map within the area occurring under T/A Kuntumanji, presenting the answer to the nearest kilometre.

(6 marks)

f. Calculate the gradient of the **S143** road from **easting 71** to **easting 74**.

(7 marks)

2. a. (i) Describe the term 'meander" in relation to river profiles.

_____

_____

(2 marks)

(ii) With the aid of diagrams describe the process leading to formation of ox-bow lakes.

_____

_____

_____

_____

_____

(9 marks)

b. **Figure 1** is a diagram showing coastal features.

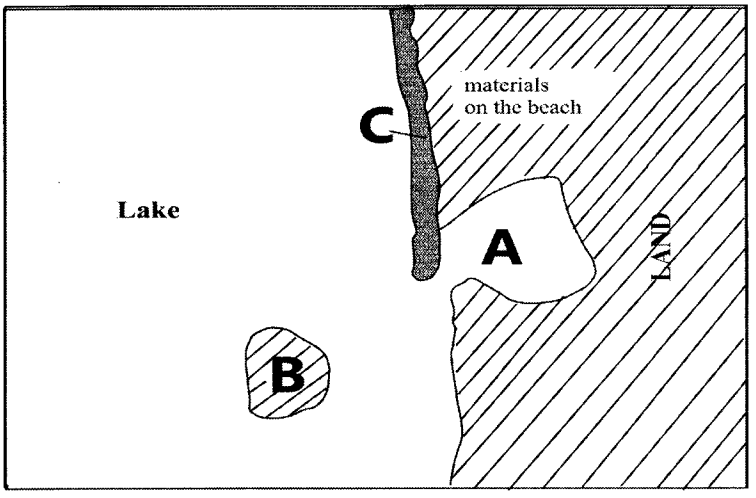

Figure 1

(i) Identify the coastal features labelled **B** and **C.**

B: _____ **(1 mark)**

2. b. (Continued)

(ii) Give any **two** examples of coastal feature **A** occurring along Lake Malawi.

_____

_____

(2 marks)

(iii) Describe the process through which coastal feature **B** is formed.

_____

_____

_____

(3 marks)

c. **Figure 2** is an illustration of a plate boundary. Use it to answer questions that follow.

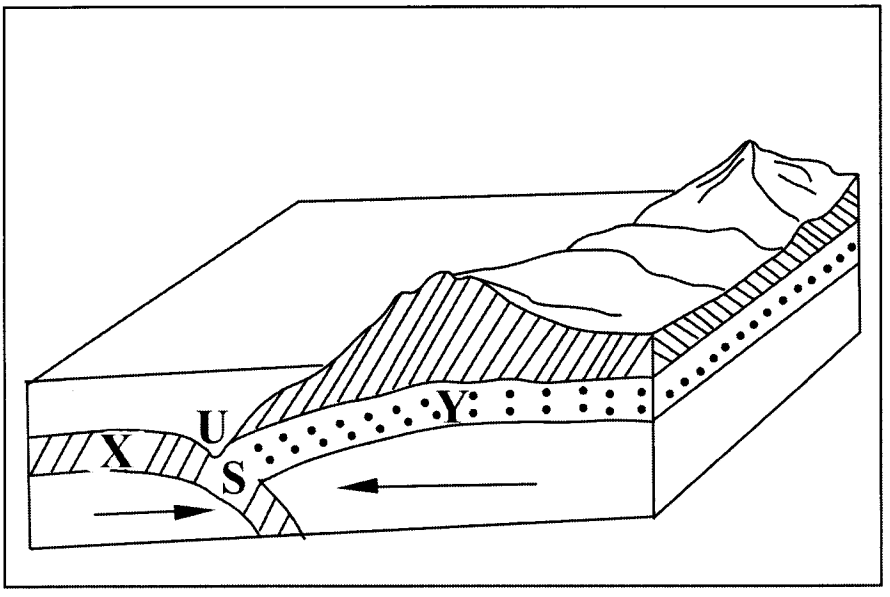

Figure 2

(i) What type of plate is plate **Y**?

_____

(1 mark)

(ii) Identify the geological feature labelled **U**.

2. c. (Continued)

(iii) Give any **two** examples of the geological feature labelled **U**.

_____

_____

(2 marks)

(iv) Describe the behaviour of plates **X** and **Y** when they meet at point **S**.

_____

_____

_____

(3 marks)

3. a. State any **two** examples of climate change adaptation measures which are used in Malawi.

_____

_____

(2 mark)

b. Explain the influence of each of the following factors towards desertification:

(i) population growth

_____

_____

(2 marks)

(ii) overgrazing

_____

_____

(2 marks)

c. Describe any **one** effect of each of the following human activities on wetlands:

(i) cultivation

_____

3. c. **(Continued)**

(ii) pollution

_____

_____

(2 marks)

d. **Figure 3** is a map showing ocean currents.

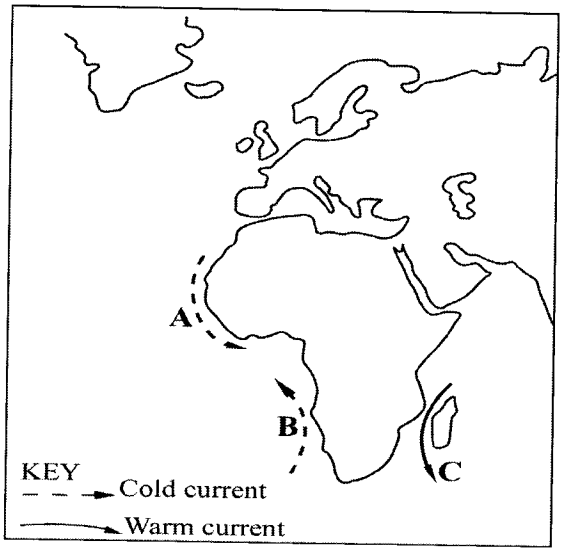

Figure 3

(i) Name the ocean currents labelled **A, B** and **C**.

A: _____ **(1 mark)**

B: _____ **(1 mark)**

C: _____ **(1 mark)**

(ii) Describe any **one** effect of each of the following ocean currents on adjacent landmasses:

1. current **A**

_____

_____

(2 marks)

2. current **B**

3. d. **(Continued)**

(iii) Explain any **one** factor which affects the direction of ocean current **C**.

_____

_____

_____

(2 marks)

e. (i) Mention any **two** causes of air pollution.

_____

_____

(2 marks)

(ii) Describe any **two** harmful effects of air pollution.

_____

_____

_____

_____

(4 marks)

Section B (25 marks)

Answer **one** question only from this section in the spaces provided.

4. a. (i) Define the term "front" in relation to air masses.

_____

_____

(1 mark)

(ii) Name any **two** examples of fronts.

_____

_____

(2 marks)

4. (Continued)

b. **Figure 4** is an illustration of a front. Use it to answer questions that follow.

Figure 4

(i) Identify the type of the front shown.

_____

(1 mark)

(ii) State any **two** atmospheric conditions which occur in an area due to the presence of the front shown.

_____

_____

(2 marks)

(iii) Describe how the front illustrated develops.

_____

_____

(3 marks)

c. **Figure 5** is an illustration showing the distribution of air pressure belts in the Southern hemisphere.

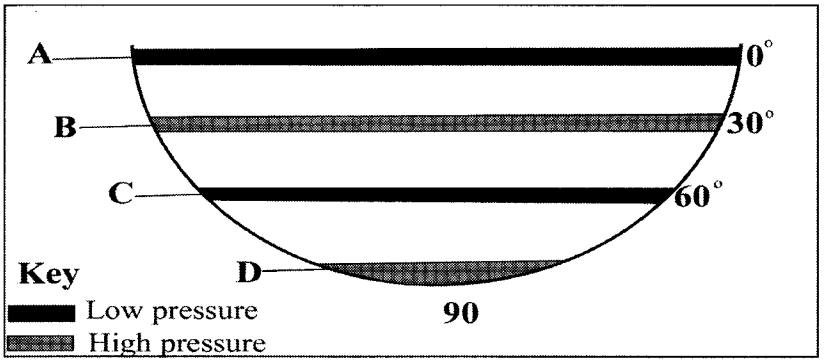

Figure 5

(i) Name the pressure belts labelled **A** and **D.**

A: **(1 mark)**

4. c. **(Continued)**

(ii) Account for the pressure patterns in each of the following pressure belts:

1. belt **B**

_____

_____

_____

(2 marks)

2. belt **C**

_____

_____

_____

(2 marks)

(iii) Using arrows, show the direction of each of the following prevailing winds on the diagram:

1. Trades **(1 mark)**
2. Westerlies **(1 mark)**
3. Polar **(1 mark)**

d. **Table 1** shows climate data for a station **M** which is located **5° S**. Use it to answer questions that follow.

Table 1

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp °C	24	24	25	25	25	24	23	23	24	25	25	24
Prec in mm	215	210	205	220	210	205	200	195	210	220	215	210

(i) Identify the climate represented by the data for station **M**.

_____

(1 mark)

(ii) Name any **two** countries in the western hemisphere which experience the climate similar to that of station **M**.

4. d. **(Continued)**

(iii) Explain any **two** challenges which affect development in the areas that are located in the climatic region represented by the table.

(4 marks)

5. a. **Table 2** shows climate data for station **P** located **35° N**. Use it to answer questions that follow.

Table 2

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp °C	06	08	14	20	24	26	26	23	21	18	12	08
Preci mm	200	100	50	20	05	00	05	15	50	150	200	220

(i) Identify the climatic region represented by the table.

(1 mark)

(ii) Calculate the annual temperature range for Station **P**.

(2 marks)

(iii) Explain the rainfall pattern for Station **P**.

5. (Continued)

b. With the aid of a well labelled diagram describe the occurrence of a land breeze.

_____

_____

_____

_____

_____

(7 marks)

c. **Figure 6** is a map of Africa showing distribution of some local winds.

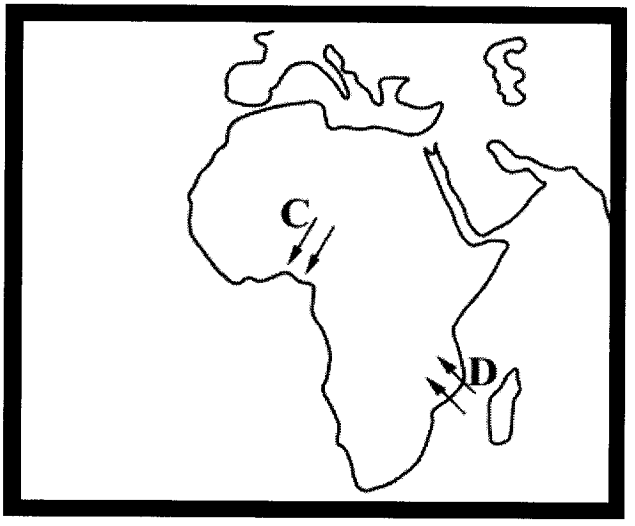

Figure 6

(i) Identify local winds **C** and **D**.

C: _____ **(1 mark)**

D: **(1 mark)**

5. c. **(Continued)**

(ii) Name the **two** countries which are affected by wind **D**.

_____

_____

(2 marks)

(iii) State any **two** characteristics of wind **D**.

_____

_____

(2 marks)

(iv) Describe the weather patterns associated with local wind **C**.

_____

_____

_____

_____

(2 marks)

(v) Explain any **two** effects of local wind **C** to the affected areas.

_____

_____

_____

_____

_____

(4 marks)

END OF QUESTION PAPER

NB: This paper contains 13 printed pages.